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ABSTRACT

A statewide performance-based accreditation system began using a performance index in 1995-96 to indicate where school districts fall in the distribution of accreditation levels. The purpose of this study was to determine whether there was a significant gain in the performance index in the second year. The performance index was based on the percentage of performance variables met by a district and was designed to assist district personnel in assessing improvement toward higher accreditation levels. District personnel were provided with a table indicating the total number of variables involved in the accreditation system and the performance index assigned for meeting each number. The performance index, used in conjunction with their district scores, indicated to personnel the number of variables on which the district needed improvement and the specific areas requiring improvement. The performance index was assigned in March 1996, and the second index was assigned in March 1997 for 1996-97. An analysis was done to determine if the gain in the 1996-97 performance index was significant over the 1995-96 index for the approximately 150 districts in the state. The difference was found to be significant ($p<.01$). A flow chart for the accreditation system is provided in an appendix. (Contains two figures, three tables, and seven references.) (Author/SLD)

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A Performance Index in a Performance-Based Accreditation System: Year Two

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Abstract

The purpose of this study was to determine whether there was a significant gain in the performance index in its second year.

A statewide performance-based accreditation system began using a performance index in 1995-96 to indicate where school districts fall in the distribution of accreditation levels. The performance index was based on the percentage of performance variables met by a district and was designed to assist district personnel in assessing improvement toward higher accreditation levels. District personnel were provided with a table indicating the total number of variables involved in the accreditation system and the performance index assigned for meeting each number. The performance index, used in conjunction with their district scores, indicated to the personnel the number of variables on which the district needed improvement and the specific areas requiring improvement.

The performance index was first assigned in March 1996, and the second index was assigned in March 1997 for 1996-97. An analysis was done to determine if the gain in the 1996-97 performance index was significant over the 1995-96 index for the approximately 150 districts in the state. The difference was found to be significant ($p < .01$).

In 1994-95 the Mississippi Commission on School Accreditation and the State Department of Education developed a performance index to be used in the statewide performance-based accreditation system. The performance index was designed to help district personnel judge the effectiveness of their district relative to the overall accreditation model. The data "help monitor and assess performance. Just as goals are an essential element of success, data are an essential piece of working towards goals" (Schmoker, 1996, p. 29). The establishment of the performance index was discussed by Jarrell, Hebbler, Troiani, and Dyson (1995). The performance index was officially assigned for the first time in 1995-96 and the second time in 1996-97. The purpose of this study was to determine whether there was a significant gain in the performance index in its second year.

Background

As Ladd (1996) pointed out, "present efforts to reform elementary and secondary education in the United States are focusing heavily on the outcomes of the educational system" (p. 1). The Mississippi accreditation system is a performance-based or outcomes-based system. The statewide performance-based accreditation system began using a performance index in 1995-96 to indicate where school districts fall in the distribution of accreditation levels. In this system districts receive an accreditation level of 1 (Probation), 2 (Warned), 3 (Successful), 4 (Advanced), or 5 (Excellent) based on compliance with both performance and process standards (see Appendix A). Levels 1 through 3 (Phase 1) are based on a group of standards set at a minimum of adequacy. Those districts meeting Level 3 standards are then evaluated against the Level 5 standards with higher criteria in Phase 2 of the system. Because the five accreditation levels do not allow much discrimination among the districts, the performance index was designed to provide more distiction within the accreditation levels. As Elmore, Abelmann, and Fuhrman (1996) indicated, the Mississippi performance index was created "to account for differences in performance among school districts assigned to the same level" (p. 75). The performance index was aligned with the accreditation levels assigned to districts by the performance-based accreditation system. A district with an accreditation level of 1 due to performance would have a performance index between 1.0 and 1.9, depending on the percentage of performance variables met. A district with an accreditation level of 2 due to performance would have a performance index between 2.0 and 2.9. The performance index ranged from 1.0 to 5.0. The performance index was based on the percentage of performance variables met by a district and was designed to assist district personnel in assessing improvement toward higher accreditation levels. District personnel are provided each year with a table indicating the total number of standards involved in the accreditation system and the performance index assigned for meeting each possible number of standards. Table 1 shows the performance index for 1995-96, and Table 2 shows the performance index for 1996-97. The performance index, used in conjunction with their district scores on the district's Performance Report (Table 3), indicated to the personnel the number of variables on which the district needed improvement and the specific areas requiring improvement. The performance index was intended as a strategy "aimed at empowering . . . local educators"

(Sagor, 1996, p. 2), while the Performance Report provides data "for correcting unwanted deviations from desired outcomes" (Duffy, 1996, p. 185).

In the Mississippi accreditation model, a district meets a performance standard by having a district average score that meets or exceeds the annual criterion for that standard. For example, the grade 4 reading score from the norm-referenced test is one of the performance standards. In 1996-97, the annual criterion was an NCE of 37.0 in Phase 1 and 47.2 in Phase 2. The district in the example in Table 3 had an NCE of 41.8; that district met the Phase 1 minimum but not the Phase 2 minimum. The district's performance index was a 3.0, indicating that the district was at the lower end of the Level 3 districts. A performance index of 3.0 tells the district personnel that there are many Phase 2 performance standards that the district did not meet. In this particular case, there are also a few Phase 1 performance standards that the district did not meet. If the district wants to raise its accreditation level, it must improve the scores of its students on each of the standards that it failed to meet.

By using the performance index and the Performance Report, personnel can see at a glance how close the district is to earning a higher accreditation level, how many standards for which they must improve the student's scores, how close they are to attaining each standard, and where the district needs to concentrate its curriculum and instruction efforts.

One problem with the performance index exists because of the changing number of standards each year. The performance-based accreditation system is constantly evolving due to the different statewide tests available for use. In 1995-96 there were 35 standards in Phase 1 and 38 in Phase 2. In 1996-97 a new subject area test in Algebra 1 was piloted to replace the former test, as a result the Algebra 1 scores were not included in the accreditation system. This meant only 34 standards in Phase 1 and 37 in Phase 2 for that year. At the same time that the Algebra 1 test was being piloted, a new U.S. History test was piloted, therefore in 1997-98 there will be 36 standards in Phase 1 and 39 in Phase 2. Each change in the number of standards requires a corresponding change in the performance index that is based on the percent of standards met.

Another problem is lack of sensitivity to the amount by which a district missed a standard. The performance index is based on whether the district met or did not meet the standards; there is no way for the index to measure how far the district was from meeting each standard that it failed to meet. For instance, the district in Table 3 failed to meet the Phase 1 Performance Assessment in Mathematics at grade 7 by 0.3 scale score points. The students were very close to performing at the level set by the Commission on School Accreditation as adequate. Another district might have missed the same standard by 75 scale score points, however both districts failed to meet the standard. If that were the only standard that both districts failed to meet, their performance indices would be the same. But the first district would not need to work as hard as the second to meet that standard the next year. (See Figure 1.)

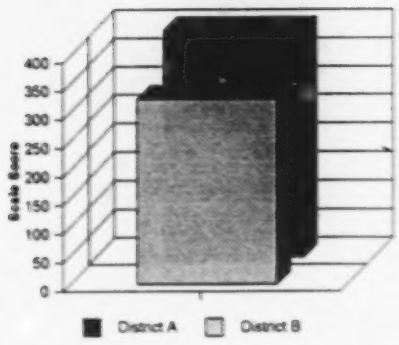

Figure 1

If two districts are compared simply on their reading scores at grade 4 - 9, one can see another example of the lack of sensitivity in the performance index. In this example (Figure 2), District A has met all but one of the reading standards. On the one standard that it failed to meet, grade 6 reading, the score is a significant distance from the annual criterion, and the district would have to work diligently with those students to improve their scores. If that were the only Phase 1 standard that the district failed to meet, its performance index would be at least 3.0 depending on how many Phase 2 standards it met. District B failed to meet each of the reading standards, but the scores in each case are barely below the Phase 1 criteria. This district would not have to work as hard to improve the scores enough to meet the standards, however its performance index would be a 2.6.

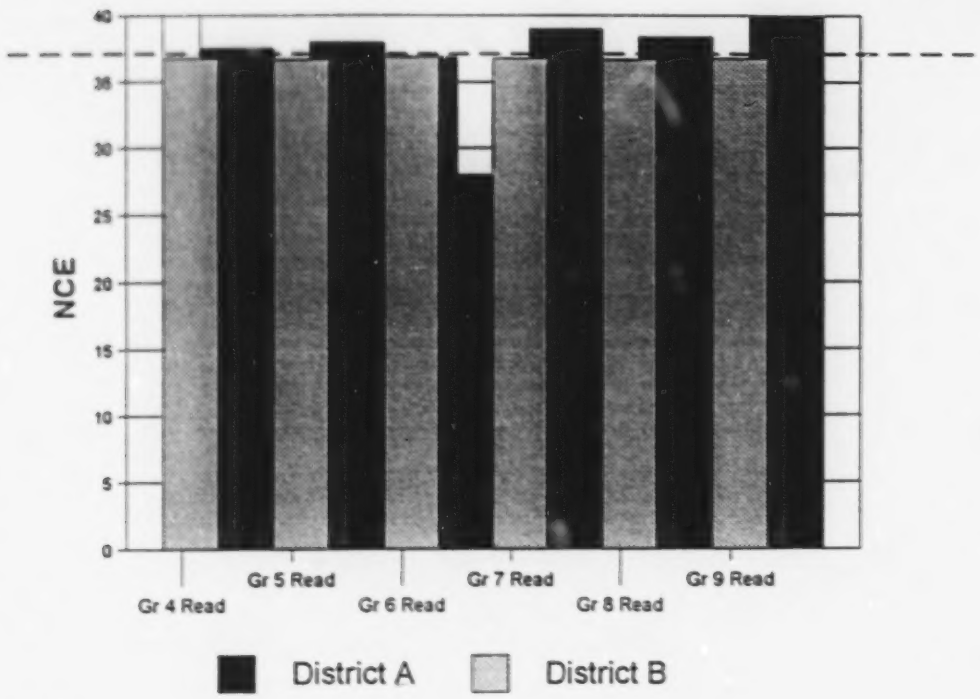

Figure 2

Despite limitations due to the varying number of standards and the lack of sensitivity in the performance index, district personnel see it as a means of monitoring their status in the performance-based accreditation system. Administration and faculty work constantly to improve the educational experience for their students, and according to Kochan (1996), "performance on standardized tests remains the predominant criterion for measuring school effectiveness" (p.1). The performance index gives school personnel a gauge to see whether they are succeeding. A district might remain at an accreditation level of 2 for several years, but if the personnel can see that their performance index is rising each year, they can make the argument that they are improving. Many times proof of improvement is necessary for satisfying the public and the state department.

Table 1
1995-96 Performance Index

	Level	Number of Variables	Number Met	Percent Met	Index
PHASE 2	5	38	38	100.0%	5.0
	4	38	37	97.4%	4.9
		38	36	94.7%	4.7
		38	35	92.1%	4.5
		38	34	89.5%	4.3
		38	33	86.8%	4.1
	3	38	31-32	81.6-84.2%	3.9
		38	29-30	76.3-78.9%	3.8
		38	27-28	71.1-73.7%	3.7
		38	25-26	65.8-68.4%	3.6
		38	23-24	60.5-63.2%	3.5
		38	21-22	55.3-57.9%	3.4
		38	19-20	50.0-52.6%	3.3
		38	17-18	44.7-47.4%	3.2
		38	15-16	39.5-42.1%	3.1
		38	<=14	<=36.8%	3.0
PHASE 1	2	35	31	88.6%	2.9
		35	30	85.7%	2.7
		35	29	82.9%	2.6
		35	28	80.0%	2.5
		35	27	77.1%	2.3
		35	26	74.3%	2.1
		35	25	71.4%	2.0
	1	35	24	68.6%	1.9
		35	23	65.7%	1.8
		35	22	62.9%	1.7
		35	21	60.0%	1.6
		35	20	57.1%	1.5
		35	19	54.3%	1.4
		35	18	51.4%	1.3
		35	17	48.6%	1.2
		35	16	45.7%	1.1
		35	<=15	<=42.9%	1.0

Table 2
1996-97 Performance Index

	Level	Number of Variables	Number Met	Percent Met	Index
PHASE 2	5	37	37	100.0%	5.0
	4	37	36	97.3%	4.9
			35	94.6%	4.7
			34	91.9%	4.5
			33	89.2%	4.3
			32	86.5%	4.1
	3	37	30-31	81.1-83.8%	3.9
			28-29	75.7-78.4%	3.8
			26-27	70.3-73.0%	3.7
			24-25	64.9-67.6%	3.6
			22-23	59.5 -62.2%	3.5
			20-21	54.1-56.8%	3.4
			18-19	48.6-51.4%	3.3
			16-17	43.2-45.9%	3.2
			14-15	37.8-40.5%	3.1
			< =13	< =35.1%	3.0
PHASE 1	2	34	30	88.2%	2.9
			29	85.3%	2.7
			28	82.4%	2.6
			27	79.4%	2.5
			26	76.5%	2.3
			25	73.5%	2.1
			24	70.6%	2.0
	1	34	23	67.6%	1.9
			22	64.7%	1.8
			21	61.8%	1.7
			20	58.8%	1.6
			19	55.9%	1.5
			18	52.9%	1.4
			17	50.0%	1.3
			16	47.1%	1.2
			15	44.1%	1.1
			< =14	< =41.1%	1.0

Table 3

PERFORMANCE BASED ACCREDITATION
1996-97 PERFORMANCE REPORT

District: 0000 County School

Date: 03/14/97

Performance Standard		District Value	Level 3 Minimum	Met	Level 5 Minimum	Met
01	FLE Reading	265.6	257.5	Yes	274.4	No
02	FLE Math	254.8	257.5	No	273.2	No
03	FLE Written Comm.	262.2	255.0	Yes	269.2	No
04	ITBS 4 Reading	41.8	37.0	Yes	47.2	No
05	ITBS 4 Language	50.1	38.8	Yes	48.2	Yes
06	ITBS 4 Mathematics	44.7	40.0	Yes	48.7	No
07	ITBS 5 Reading	42.8	37.0	Yes	46.2	No
08	ITBS 5 Language	54.5	38.5	Yes	48.9	Yes
09	ITBS 5 Mathematics	44.7	38.6	Yes	49.4	No
10	ITBS 6 Reading	47.2	39.3	Yes	49.5	No
11	ITBS 6 Language	57.4	39.9	Yes	47.4	Yes
12	ITBS 6 Mathematics	49.0	40.0	Yes	47.6	Yes
13	ITBS 7 Reading	40.9	37.0	Yes	48.2	No
14	ITBS 7 Language	45.8	39.7	Yes	50.0	No
15	ITBS 7 Mathematics	45.0	37.9	Yes	48.0	No
16	ITBS 8 Reading	41.4	40.0	Yes	51.7	No
17	ITBS 8 Language	42.2	40.0	Yes	50.1	No
18	ITBS 8 Mathematics	43.0	37.3	Yes	47.9	No
19	TAP 9 Reading	39.5	37.0	Yes	47.0	No
20	TAP 9 Language	45.4	40.0	Yes	49.8	No
21	TAP 9 Mathematics	41.4	37.0	Yes	45.9	No
22	PA 4 Int Lang Arts	441.6	400.0	Yes	480.6	No
23	PA 4 Mathematics	415.7	400.0	Yes	463.6	No
24	PA 5 Int Lang Arts	468.5	400.0	Yes	478.6	No
25	PA 5 Mathematics	413.1	400.0	Yes	453.0	No
26	PA 6 Int Lang Arts	478.0	400.0	Yes	478.8	No
27	PA 6 Mathematics	471.1	400.0	Yes	463.1	Yes
28	PA 7 Int Lang Arts	436.1	400.0	Yes	468.4	No
29	PA 7 Mathematics	399.7	400.0	No	454.9	No
30	PA 8 Int Lang Arts	436.5	400.0	Yes	472.6	No
31	PA 8 Mathematics	406.6	400.0	Yes	441.1	No
32	PA 9 Int Lang Arts	443.1	400.0	Yes	467.9	No
33	PA 9 Mathematics	401.7	400.0	Yes	441.5	No
34	% in 1st Quarter	Met 3/7, 2/7	30% on 5/7	No	25% on 5/7	No
35	ACT Composite Score	17.1	N/A	N/A	20.2	No
36	IHL (% ACT Core)	43.1%	N/A	N/A	35%	Yes
37	Graduation Rate	70.7%	N/A	N/A	75%	No

Percentage of Level 3 Performance Standards Met: (31 / 34) 91.2%

Percentage of Level 5 Performance Standards Met: (6 / 37) 16.2%

Your District's 1996-97 Performance Index = 3.0

Your 1996-97 accreditation level will depend on the information on this report plus compliance with the accreditation process standards. See Bulletin 171 (12th Edition, Revised, pg. 19) for complete information on the performance standards and interpretation of the performance index. On variable #34 the district value indicates the number of tests on which the district met the Level 3 and the Level 5 minimums.

Analysis

The performance index was first assigned in March 1996, and the second index was assigned in March 1997 for the 1996-97 school year. An analysis was done to determine if the gain in the 1996-97 performance index over the 1995-96 index for the 153 districts in the state was significant. The average performance index in 1995-96 was 3.1, while the average performance index in 1996-97 was 3.2. The differences showed 32 districts had a decrease ranging from 0.1 to 1.5 points, 53 districts remained at the same performance index, and 68 districts showed an increase ranging from 0.1 to 2.5 points. A t-test on the differences between the two indices was significant ($p < .01$).

Conclusions

Despite the statistical significance, care must be taken in interpreting the change. As noted earlier, there are weaknesses in the calculation of the performance index due to the varying number of performance standards from year to year. The performance index is, however, more helpful than the accreditation level in distinguishing among the districts' performance. During years when the number of standards in the accreditation system is stable, the performance index will provide a better gauge than in those years when there are standards added or dropped.

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Appendix A
Performance-Based Accreditation System